Amendments to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

Claim 1 (original) A mixture of reaction products of

$$x(Ti\text{-}(OR^1)_4) + y(HO\text{-}R^2\text{-}OH) + z((HO)\text{-}C(R^3)(R^4)\text{-}W\text{-}C(R^5)(R^6)\text{-}(OH)),$$

the mixture being substantially free from di-functional diols other than $HO\text{-}R^2\text{-}OH$, wherein

each R^1 is independently a C_1-C_{10} alkyl group;

R^2 is a C_2-C_6 alkylene group;

each of R^3, R^4, R^5, and R^6 is independently a hydrogen atom or a C_1-C_4 alkyl group except that

at least one of R^3 and R^4 is a C_1-C_4 alkyl group, and

at least one of R^5 and R^6 is a C_1-C_4 alkyl group;

W is an oxygen atom, a sulfur atom, a nitrogen-containing group, a phosphorus-containing group, or a C_1-C_4 alkylene group;

each of x and y is greater than 0; and

$y > z$.

Claim 2 (original) The mixture of claim 1 wherein $y = 2x - z$ and each of x, y, z is a number greater than 0.

Claim 3 (original) The mixture of claim 1 wherein $z = 0$ and $y/x > 2$.

Claim 4 (original) The mixture of claim 1 where W is a C_1-C_4 alkylene group.

Claim 5 (original) The mixture of claim 4 wherein R^1 is an isopropyl group; R^2 is a butylene group; each of R^3, R^4, and R^5 is a methyl group; and R^6 is a hydrogen atom.

Claim 6 (original) The mixture of claim 1 wherein the mixture of reaction products is substantially free from all mono- and di-functional alcohols.

Claim 7 (original) A mixture of reaction products of

$$n(Ti\text{-}(OR^1)_4) + (2n\text{-}m)((HO\text{-}R^2\text{-}OH) + m((HO)\text{-}C(R^3)(R^4)\text{-}W\text{-}C(R^5)(R^6)\text{-}(OH)),$$

the mixture being substantially free from di-functional diols, wherein

each R^1 is independently a C_1-C_{10} alkyl group;

R^2 is a C_2-C_6 alkylene group;

each of R^3, R^4, R^5, and R^6 is independently a hydrogen atom or a C_1-C_4 alkyl group except that

at least one of R^3 and R^4 is a C_1-C_4 alkyl group, and

at least one of R^5 and R^6 is a C_1-C_4 alkyl group;

W is an oxygen atom, a sulfur atom, a nitrogen-containing group, a phosphorus-containing group, or a C_1-C_4 alkylene group; and

each of m and n is greater than 0.

Claim 8 (original) The mixture of claim 7 where W is a C_1-C_4 alkylene group.

Claim 9 (original) The mixture of claim 7 wherein R^1 is an isopropyl group.

Claim 10 (original) The mixture of claim 7 wherein R^2 is a butylene group.

Claim 11 (original) The mixture of claim 7 wherein R^1 is an isopropyl group; R^2 is a butylene group; each of R^3, R^4, and R^5 is a methyl group; R^6 is a hydrogen atom; and W is a methylene group.

Claim 12 (original) The mixture of claim 7 wherein m/2n is between about 0.1 to about 0.5.

Claim 13 (original) The mixture of claim 12 wherein m/2n is between about 0.15 to about 0.25.

Claim 14 (original) The mixture of claim 7 further comprising an organic solvent.

Claim 15 (original) The mixture of claim 7 wherein the mixture is obtained from a reaction conducted in an organic solvent.

Claim 16 (original) The mixture of claim 15 wherein the organic solvent is a chlorohydrocarbon.

Claim 17 (original) The mixture of claim 16 wherein the organic solvent is *o*-dichlorobenzene.

Claim 18 (original) The mixture of claim 7 wherein the mixture of reaction products is substantially free from all mono- and di-functional alcohols.

Claims 19-25 (canceled)

Claim 26 (original) A method for depolymerizing a polyester comprising the step of contacting, in the presence of heat, a mixture comprising: a polyester, an organic solvent which is

substantially free of oxygen and water, and the mixture of claim 1, to produce macrocyclic oligoesters substantially free from macrocyclic co-oligoesters.

Claim 27 (original) The method of claim 26 wherein the polyester comprise poly(1,4-butylene terephthalate).

Claim 28 (original) A method for depolymerizing a polyester comprising the step of contacting, in the presence of heat, a mixture comprising: a polyester, an organic solvent which is substantially free of oxygen and water, and the mixture of claim 7, to produce macrocyclic oligoesters substantially free from macrocyclic co-oligoesters.

Claim 29 (currently amended) A method for depolymerizing a polyester to produce macrocyclic oligoesters substantially free from macrocyclic co-oligoesters, the method comprising the step of contacting, in the presence of heat, a mixture comprising: a polyester, an organic solvent which is substantially free of oxygen and water, and ~~the~~ a mixture of ~~claim 19,~~ reaction products of:

$$n(Ti\text{-}(OR^1)_4) + m(HO\text{-}R^2\text{-}OH),$$

wherein

each R^1 is independently a C_1-C_{10} alkyl group;

R^2 is an unbranched C_2-C_6 alkylene group; and

each of m and n is greater than 0, and $m/n > 2$

~~to produce macrocyclic oligoesters substantially free from macrocyclic co-oligoesters~~.

Claim 30 (new) The mixture of claim 1 wherein W is an oxygen atom, a sulfur atom, a nitrogen-containing group, a phosphorus-containing group, an ethylene group, a propylene group, or a butylene group.

Claim 31 (new) A method for depolymerizing a polyester comprising the step of contacting, in the presence of heat, a polyester, an organic solvent, and a mixture of reaction products of

$$x(Ti\text{-}(OR^1)_4) + y(HO\text{-}R^2\text{-}OH) + z((HO)\text{-}C(R^3)(R^4)\text{-}W\text{-}C(R^5)(R^6)\text{-}(OH)),$$

wherein

each R^1 is independently a C_1-C_{10} alkyl group;

R^2 is a C_2-C_6 alkylene group;

each of R^3, R^4, R^5 and R^6 is independently a hydrogen atom or a C_1-C_4 alkyl group;

W is an oxygen atom, a sulfur atom, a nitrogen-containing group, a phosphorus-containing group, or a C_1-C_4 alkylene group;

each of x and y is greater than 0; and

y>z.

Claim 32 (new) The method of claim 31 wherein the mixture of reaction products is substantially free from di-functional diols other than HO-R^2-OH.

Claim 33 (new) A method for depolymerizing a polyester comprising the step of contacting, in the presence of heat, a polyester, an organic solvent, and a mixture of reaction products of

$$n(Ti\text{-}(OR^1)_4) + m(HO\text{-}R^2\text{-}OH),$$

wherein

each R^1 is independently a C_1-C_{10} alkyl group;

R^2 is a C_2-C_6 alkylene group; and

each of m and n is greater than 0, and m/n > 2.

Claim 34 (new) The method of claim 33 wherein R^1 is an isopropyl group.

Claim 35 (new) The method of claim 33 wherein R^2 is a butylene group.

Claim 36 (new) The method of claim 33 wherein R^1 is an isopropyl group and R^2 is a butylene group.

Claim 37 (new) The method of claim 33 wherein 5 > m/n > 3.

Claim 38 (new) The method of claim 33 wherein the mixture is obtained from a reaction conducted without a solvent.

Claim 39 (new) The method of claim 33 substantially free of all mono- and di-functional alcohols.

Claim 40 (new) The method of claim 33 wherein R^2 is an unbranched C_2-C_6 alkylene group.